

**REMARKS**

This Application has been carefully reviewed in light of the Office Action mailed December 8, 2004 (the "Office Action"). The Office Action rejects Claims 37-46, 85-94, and 108-117. Applicants respectfully request reconsideration and favorable action in this case.

**Section 102 Rejections – Clare**

The Examiner rejects Claims 37-40, 42, 44-46, 85-88, 90 and 92-94 under 35 U.S.C. § 102(e) as being unpatentable over U.S. Patent No. 6,414,955 B1 issued to Clare et al. ("*Clare*"). Applicants respectfully traverse these rejections for the reasons discussed below.

Claim 37 recites "after reconfiguring the wireless node, transitioning the wireless node to a normal operating state in response to determining the operational data is within predefined parameters." Claim 85 recites a similar element. In discussing this element with respect to the rejection based on *Clare*, the Office Action states that "assuming the above limitation is in the learning state, then the limitation is taught by the reference on the first iteration." Office Action, page 3. However, the Office Action fails to cite to any portion of *Clare* for this statement and fails to explain how *Clare* discloses this element "on the first iteration." Applicant respectfully submits that this statement does not provide the necessary support to rely on *Clare* as disclosing "after reconfiguring the wireless node, transitioning the wireless node to a normal operating state in response to determining the operational data is within predefined parameters." For example, there is no disclosure of determining that operational data is within predefined parameters or doing anything in response to a determination that operational data is within predefined parameters, particularly in light of the portions of *Clare* relied on as disclosing other elements of Claims 37 and 85.

The Office Action further states that "[a]ssuming the above limitation is in the operational state, then the limitation is also taught when a new node becomes on-line, see e.g., column 6, lines 22-26." Office Action, page 3. First, Applicants believe the Examiner has mis-cited to this portion of *Clare*. Applicants believe and assume that the Examiner intended to cite to column 16, lines 22-26 instead of to column 6, lines 22-26. Previous Office Actions have cited to column 16, lines 22-26, and column 6, lines 22-26 discusses

various modes of placing a network of nodes. *See Clare*, col. 6, lines 22-26. Applicants request clarification if this assumption is incorrect.

Assuming that the Office Action intended to cite to column 16, lines 22-26 in stating that the claim element discussed above is taught "when a new node becomes on-line," Applicants respectfully disagree with the Office Action's assertion. With respect to new nodes being added, *Clare* states that "[h]aving received the complete routing information and schedule for communication within the network, the new node is now a member of the network and the entire flow chart is repeated from each node in the network as an inviting node until no new nodes are detected." This portion of *Clare* does not disclose "after reconfiguring the wireless node, transitioning the wireless node to a normal operating state in response to determining the operational data is within predefined parameters." For example, there is no disclosure of determining that operational data is within predefined parameters or doing anything in response to a determination that operational data is within predefined parameters, particularly in light of the portions of *Clare* relied on as disclosing other elements of Claims 37 and 85.

Therefore, for at least these reasons, Applicants respectfully submit that Claims 37 and 85 are patentable over the cited art used in the rejections and request that the rejections to Claims 37 and 85 be withdrawn.

Claims 38-40, 42 and 44-46 each depends from Claim 37 and therefore includes each of the elements of Claim 37. Applicants thus respectfully request that the rejections of Claims 38-40, 42 and 44-46 be withdrawn because, as discussed above, Claim 37 is patentable over the cited art used in the rejection.

Claims 86-88, 90 and 92-94 each depends from Claim 85 and therefore includes each of the elements of Claim 85. Applicants thus respectfully request that the rejections of Claims 86-88, 90 and 92-94 be withdrawn because, as discussed above, Claim 85 is patentable over the cited art used in the rejection.

**Section 102 Rejections – Olofsson**

The Examiner rejects Claims 37, 41, 44-46, 85, 89, 92-94 and 108-117 under 35 U.S.C. § 102(e) as being unpatentable over U.S. Patent No. 6,134,230 A issued to Olofsson et al. ("*Olofsson*"). Applicants respectfully traverse these rejections for the reasons discussed below.

Claim 37 recites "configuring the wireless node based on the operating parameters," "activating a radio frequency (RF) system for the wireless node," "transitioning the wireless node to a learning state" and "collecting operational data in the learning state," "modifying the operating parameters based on the operational data" and "after reconfiguring the wireless node, transitioning the wireless node to a normal operating state in response to determining the operational data is within predefined parameters." Claims 85, 108 and 113 recite similar elements.

*Olofsson* is directed to a method for selecting a link protocol for a transparent data service based on a predefined service requirement and a basic capability of the mobile or base stations. See *Olofsson*, Abstract. To support the disclosure of the claim elements "configuring the wireless node based on the operating parameters," "activating a radio frequency (RF) system for the wireless node," "transitioning the wireless node to a learning state" and "collecting operational data in the learning state" and "modifying the operating parameters based on the operational data," the Office Action cites to step 807 of figure 7 of *Olofsson* and states that:

In particular, once the set of pre-selected combinations is selected, the method of the invention selects an optimal link protocol based on link quality parameters measured on all available RF links. Examiner notes the link quality parameters are the "operational data." As such, in order to measure the link quality of an RF link, the link must be first activated and then configured where the measuring (or "collecting") occurs during a "learning state". In other words, *Olofsson* inherently teaches configuring the wireless node based on the operating parameters and activating the RF system for the node since the node cannot obtain the link quality parameters (i.e., operational data) unless the node is first configured and then activated. The operating parameters or information in Table 2 is further modified since the optimal link protocol is selected (i.e., the system uses the operational data to estimate the service quality which is in-turned used to select the optimal link protocol). In

addition, the operating data further includes at least measuring (or "collecting") FER, see e.g., column 12, lines 18-32.

Office Action, pages 7-8. The portion of *Oloffson* cited by the Office Action essentially discloses measuring link quality parameters and estimating a measure of service quality for all possible combinations of modulation and channel coding schemes. See *Oloffson*, col. 12, lines 18-32. Applicants respectfully submit that this disclosure does not disclose, teach or suggest each of the elements "configuring the wireless node based on the operating parameters," "activating a radio frequency (RF) system for the wireless node," "transitioning the wireless node to a learning state" and "collecting operational data in the learning state and modifying the operating parameters based on the operational data." For example, there is no disclosure of configuring the wireless node based on the operating parameters. The Office Action had previously cited to the information of Table 1 of *Oloffson* as including operating parameters. However, the information in this table, different example combinations for two channel coding schemes and two modulation schemes, is determined based on the basic capabilities of the mobile stations 12 and the BTSs 20. See *Oloffson*, col. 9, lines 48-50 and col. 10, lines 15-18. The possible combinations (of Table 1) that mobile stations 12 and the BTSs 20 can support "may be restricted by their hardware or software capabilities." *Id.*, col. 10, lines 18-20. Thus, the information of *Oloffson* alleged to be the operating parameters is collected based on the limitations of mobile stations 12 and BTSs 20, and there is no disclosure of configuring the wireless node based on the operating parameters.

In addition, to support the disclosure of the claim element "after reconfiguring the wireless node, transitioning the wireless node to a normal operating state in response to determining the operational data is within predefined parameters," the Office Action states that:

[T]he node is transitioned to a normal operating state where the optimum link protocol is selected. In particular, the limitation in response to determining the operational data is within predefined parameters . . . is taught since the most optimal link was selected from Table 2 (i.e., in order for the most optimal link to be selected, the RF link must meet the link quality parameters or operational data criteria such as FER).

Office Action, page 8. In *Oloffson*, an optimal link is selected, and the system 10 performs a link adaptation procedure to use the selected optimum link protocol, block 815. See *Oloffson*,

col. 13, lines 54-55. The Office Action alleges this step to disclose "after reconfiguring the wireless node, transitioning the wireless node to a normal operating state." However, there is no disclosure for in response to determining the operational data is within predefined parameters. In fact, there is no determination in Oloffson that operation data is within predefined parameters. The Office Action appears to suggest that this determination is inherent in the mere selection of a most optimal link, but it is this link selection that the Office Action alleges discloses the previous claim element "modifying the operating parameters based on the operational data." Office Action, page 8.

Applicants additionally note that there is no disclosure in Oloffson for a start up state, a learning state or an operational state of a wireless node. The Office Action even states that *Oloffson* only discloses a single state. See Office Action, page 3. Moreover, the Office Action suggests that the claimed learning and operating states both perform the function of collecting and determining "such that the states are essentially the same where one is a first iteration and the other is a second iteration." Office Action, page 3. Applicants again note that to support an anticipation rejection, the identical invention must be shown in as complete detail as is contained in the claim and must be arranged as required by the claim. See *Richardson v. Suzuki Motor Co.*, 868 F.2d 1226, 1236 (Fed. Cir. 1989) (*emphasis added*); see also *In re Bond*, 910 F.2d 831 (Fed. Cir. 1990). Applicants submit that the claim language is clear in that a transition is made to an operating state in response to determining the operational data is within predefined parameters. This is not inconsistent with the embodiment disclosed in Figure 26 in which after a transition to an operating state from a learning state, operational data is continuously collected and, if operational thresholds are not met, a router is transitioned back to a learning state. See Specification, page 39, lines 9-20.

Therefore, for at least these reasons, Applicants respectfully submit that Claims 37, 85, 108 and 113 are patentable over the cited art used in the rejections and request that the rejections to Claims 37, 85, 108 and 113 be withdrawn.

Claims 41, 44-46 and 109-112 each depends from Claim 37 and therefore includes each of the elements of Claim 37. Applicants thus respectfully request that the rejections of

Claims 41, 44-46 and 109-112 be withdrawn because, as discussed above, Claim 37 is patentable over the cited art used in the rejection.

Claims 89, 92-94 and 114-117 each depends from Claim 85 and therefore includes each of the elements of Claim 85. Applicants thus respectfully request that the rejections of Claims 89, 92-94 and 114-117 be withdrawn because, as discussed above, Claim 85 is patentable over the cited art used in the rejection.

In addition, Claim 41 recites "collecting operational data in the normal operating state and transitioning back to the learning state in response to determining the operational data is outside the predefined parameters." Claim 89 recites a similar element. The Office Action contends that *Oloffson* teaches a "singular state as combined blocks selection of optimum link protocol 807 and perform changes 815 such that at the first iteration the singular state is a 'learning state' and a second iteration the singular state is either a 'leaning state' or an 'operational state'." Office Action, page 9 (*emphasis in original*). However, this does not disclose, teach or suggest transitioning back to the learning state in response to determining the operational data is outside the predefined parameters. *Oloffson* does not even disclose any determination that collected operational data is outside predefined parameters. Therefore, for at least this additional reason, Applicants respectfully submit that Claims 41 and 89 are patentable over the cited art used in the rejections and request that the rejections of these claims be withdrawn.

### **Section 103 Rejections – Claims 41, 43, 89 and 91**

The Examiner rejects Claims 41, 43, 89 and 91 under 35 U.S.C. § 103(a) as being unpatentable over *Clare* in view of "On the Performance of a Routing Protocol for the Reconfigurable Wireless Network" to Haas et al. ("*Haas*"). Applicants respectfully traverse these rejections for the reasons discussed below.

Claims 41 and 43 each depends from Claim 37 and therefore includes each of the elements of Claim 37. Applicants thus respectfully request that the rejections of Claims 41

and 43 be withdrawn because, as discussed above, Claim 37 is patentable over the cited art used in the rejection.

Claims 89 and 91 each depends from Claim 85 and therefore includes each of the elements of Claim 85. Applicants thus respectfully request that the rejections of Claims 89 and 91 be withdrawn because, as discussed above, Claim 85 is patentable over the cited art used in the rejection.

In addition, Claim 41 recites "collecting operational data in the normal operating state and transitioning back to the learning state in response to determining the operational data is outside the predefined parameters." Claim 89 recites a similar element. The Office Action contends that *Clare* teaches transitioning back to a learning state. *See* Office Action, page 4. The Office Action also states that *Haas* "teaches the further recited limitation above at e.g., left hand column page 102." Office Action, page 11. However, the Office Action does not cite to a specific portion of this column of *Haas* as disclosing collecting operational data in the normal operating state and transitioning back to the learning state in response to determining the operational data is outside the predefined parameters, nor does the cited column disclose these elements. The cited column of *Haas* broadly discusses reconfigurable wireless networks, but does not disclose, teach or suggest determining the operational data is outside predefined parameters.

Claim 43 recites "transitioning from the normal operating state back to the learning state in response to accepting a modification in operating parameters requested by a neighboring node." Claim 91 recites a similar element. In a similar manner to the rejection of Claim 41 discussed above, the Office Action states that *Haas* "teaches the further recited limitation above at e.g., left hand column page 102." Office Action, page 11. However, the Office Action does not cite to a specific portion of this column of *Haas* as disclosing transitioning from the normal operating state back to the learning state in response to accepting a modification in operating parameters requested by a neighboring node, nor does the cited column disclose these elements. The cited column of *Haas* broadly discusses

reconfigurable wireless networks, but does not disclose, teach or suggest accepting a modification in operating parameters requested by a neighboring node.

In addition, the M.P.E.P. sets forth a strict legal standard for finding obviousness based on a combination of references. According to the M.P.E.P., "[o]bviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either explicitly or implicitly in the references themselves or in the knowledge [that was] generally available to one of ordinary skill in the art" at the time of the invention. M.P.E.P. § 2143.01. The Office Action suggests that *Haas* provides a motivation for combination with *Clare* on "page 104, right-hand column." Office Action, page 7. However, this cited column of *Haas* discloses the performance of a zone routing scheme. There is no motivation in this cited column for combining any portion of *Haas* with the teachings of *Clare*.

Therefore, for at least these additional reasons, Applicants respectfully submit that Claims 41, 43, 89 and 91 are patentable over the cited art used in the rejections and request that the rejections of these claims be withdrawn.




**CONCLUSIONS**

Applicants have made an earnest attempt to place this case in condition for allowance. For the foregoing reasons and for other reasons clearly apparent, Applicants respectfully request full allowance of all pending claims.

If the present application is not allowed and/or if one or more of the rejections is maintained, Applicants hereby request a telephone conference with the Examiner and further request that the Examiner contact the undersigned attorney to schedule the telephone conference.

No fee is believed to be due. However, the Commissioner is hereby authorized to charge any fees to Deposit Account No. 02-0384 of Baker Botts L.L.P.

Respectfully submitted,  
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